



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

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(603) 271-3406 FAX (603) 271-7894



Mr. Alan Swan
Public Works Office
Town of Derry
Municipal Center
14 Manning Street
Derry, NH 03038

May 7, 2002
Letter of Deficiency
DAM #063.44

RE: Cole Marsh Pond Dam, Derry

Dear Mr. Swan

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that plays a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on January 3, 2002. During this visual inspection and file review it was noted that the dam was not constructed in accordance with Dam Permit 63.44 issued September 10, 1990. Specifically, the proposed spillway had a mean length of 22 feet, the as-built plans indicate that the constructed spillway has a mean length of 10 feet. In addition the following items were noted:

The dam was not built in accordance with Dam Permit 63.44 issued September 10, 1990 and does not have sufficient discharge capacity to pass the design event with 1 foot of freeboard;

2. The following is a list of deficiencies of the right embankment:
 - a. There is severe erosion along the entire upstream face;
 - b. The crest is uneven and does not have good grass cover;
 - c. There is tree and brush growth on the downstream face;
3. The following is a list of deficiencies regarding the spillway area:
 - a. There is a beaver dam built on the wooden spillway raising the impoundment;
 - b. The spillway does not have sufficient discharge capacity;
 - c. The rip rap protection on both the upstream and downstream portions of the wood spillway were not visible at the time of the inspection;
 - d. There was no ballast (i.e. rip-rap) on the downstream side of the wooden spillway walls;
 - e. There was brush growing on both the upstream and downstream areas of the wooden spillway;
4. The following is a list of deficiencies of the left embankment:
 - a. There is erosion on the upstream face of the embankment;
 - b. The crest is uneven;
 - c. There is tree and brush growth on the downstream face; and
5. There is no operations and maintenance plan on file with the DES.

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DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

August 1, 2002:

1. Submit design plans and specifications to increase the discharge capacity by either building the dam in accordance with the original design, or submit an application to re-construct a dam that will require the dam to pass the 100 year event;
2. Confirm that the upstream and downstream slopes are a minimum of 2.5:1 and conduct the following repairs on the right embankment:
 - a. Repair the erosion on the upstream face;
 - b. Grade the crest to maintain a flat even surface with a minimum crest width of 6 feet;
 - c. Remove the tree and brush growth on the downstream face;
 - d. Establish a good grass cover on the entire embankment;
3. Repair the following items in the spillway area:
 - a. Remove the beaver dam that has been built on the spillway crest;
 - b. Install the riprap protection at the spillway approach and discharge areas as depicted on the design plans;
 - c. Install riprap ballast on the downstream side of the wood spillway walls;
 - d. Extend the downstream wood spillway training walls in order to maintain a minimum embankment slope of 2.5:1;
 - e. Remove the trees and brush from the upstream and downstream areas of the spillway;
4. Conduct the following repairs to the left embankment:
 - a. Repair the erosion on the upstream face;
 - b. Grade the crest to maintain a flat even surface with a minimum crest width of 6 feet;
 - c. Remove the tree and brush growth on the downstream face;
 - d. Establish a good grass cover on the entire embankment; and
5. Prepare and submit an operations and maintenance plan. Due to the historical beaver activity the plan should initially call for monthly site visits to remove beaver debris. If the initial monthly visits are deemed to be too frequent, the plan can be modified to reflect site conditions.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

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If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the top of the previous page.

Sincerely,

COPY

Jeffrey M. Blaney
Dam Safety Engineer

Attachments Guideline for an O&M plan, DB8, DB13

cc: Gretchen Rule

Certified # 7099 3400 0002 9773 7245

JMB/was/h:/safety/wendy/lod/063-44lod.doc